

# Ultrasonic homogenizer VP-050N

**Automatic tuning and easy operation. Various operation modes according to the condition of samples. Small hand-held type is suitable for small-volume samples. For disruption of E. coli, etc. after expression of protein.**



VP-050N with Stepped Micro Tip (Optional)

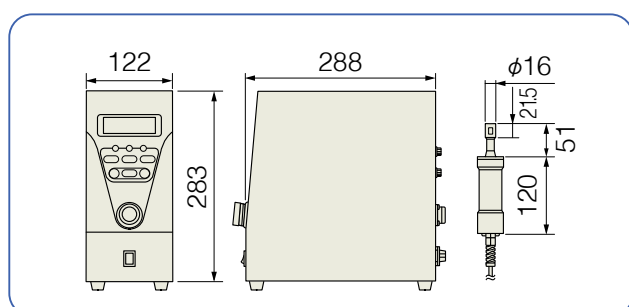
## Automatic tuning and Operation mode

The automatic tuning before use is completed in about 5 seconds just by pressing the button. Possible for Timer operation and Program interval operation. Equipped with PWM operation mode that automatically adjusts the output according to the viscosity change of the sample. It is also equipped with POW operation mode that performs stable oscillation when the sample viscosity and temp. changes are small.

Model	<b>VP-050N</b>
High frequency output	<b>Maximum 50 W</b>
Transducer normal output	<b>10 to 40 W</b>
Oscillation frequency range	<b>19.5 to 20.5 kHz</b>
Turning	<b>Automatically</b>
Operation mode	PWM operation: Automatic output adjustment according to viscosity change of sample POW operation: Stable oscillation when change in viscosity or temp are small
Other functions	Timer operation (1 sec to 120 min) Programmed interval operation (ON: 3 to 60 sec, OFF: 1 to 60 sec)
Display	Real time output value %, Output value setting %, Output value when oscillation start (%), Oscillation frequency
Configuration	Main unit, Converter (Horn/Oscillation switch integrated)
Oscillation switch	Equipped in both Main unit and Converter (Optional foot switch can be used)
Dimensions (WxDxH)	122 x 288 x 283 mm
Weight	Approx. 4.5 kg
Power supply	AC100V/1A (Need a step-down transformer)

•Optional step type Micro Tip required for use. •The chips for the previous model VP-5S cannot be used. The chips for this model can be used in the previous model VP-5S. •The chips for this model cannot be used in the previous model VP-5.

## Dimensions



## Features

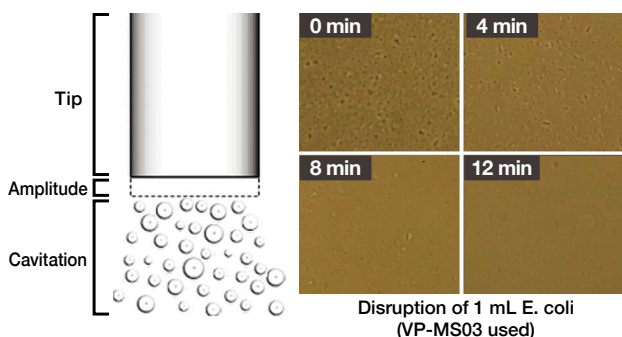
- Handy type for small volume. The throughput is 0.1 to 10 mL
- Easy tuning completed in about 5 seconds
- Auto power operation to adjust output automatically during use

## Applications

- Disruption and Solubilization of E. coli where protein is expressed
- Random fragmentation of Genomic DNA
- Homogenization and Emulsification of samples

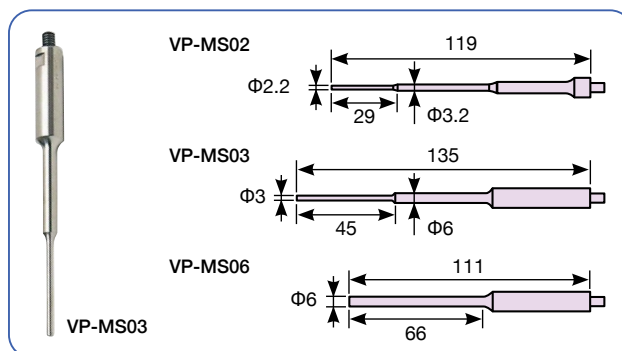
## Sonication

The vibration of the tip causes a cavitation of innumerable bubbles in the liquid to disrupt the object. The advantage is that the object can be disrupted uniformly. On the other hand, Intermittent operation or Ice-cooling of the sample is recommended as the sample may generate heat.



Disruption of 1 mL E. coli (VP-MS03 used)

## Optional accessories



Product Name/Model	Remarks
<b>Φ2mm Stepped Micro Tip VP-MS02</b>	Throughput 0.1 to 10 mL
<b>Φ3mm Stepped Micro Tip VP-MS03</b>	Throughput 0.25 to 10 mL
<b>Φ6mm Stepped Micro Tip VP-MS06</b>	Throughput 2 to 10 mL
<b>Foot switch VP-FS01</b>	Compatible with VP-300N

(\*)Microtubes (0.5/1.5/2.0 mL) can be used with Φ2 mm and Φ3 mm. •Each material of the Chip is Titanium. Replace the Chips if necessary as it is a consumable. •Compatible with previous models (VP-5S/15S/30S/60S). Confirm that the Chips can be used in the instruction manual.

NEW

Constant temperature incubator shaker  
OD Monitor

For cell culture related products

Shaker

Mixer  
Rotator  
Stirrer

Bead beater  
homogenizer  
Ultrasonic  
homogenizer

Aluminum block Bath  
Mini-size Bath

Water bath  
Shaking Water bath  
Immersion cooler

Hybridization  
Incubator  
Constant temperature  
Chambers

Centrifugal  
Concentrators  
Cold Trap

Freeze dryers

Substrate  
Electrophoresis apparatus  
Blotting device for  
hybridization

Constant-temperature  
water circulating  
system [Chiller]

Appendix